Research Protocol

**Metro North Health**

#### Research project title (full)

A retrospective study of head and neck malignancy treated with hypofractionation dose of 50Gy.

#### Research project title (short)

Hypofractionation dose

#### Study investigators

|  |  |
| --- | --- |
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#### Study sponsor

This is an investigator-initiated study lead by Metro North Health. There are no collaborating parties.

#### Funding

This study is supported by an Internal Seed Grant and in-kind support from collaborating parties.

### Version history

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Change date | Section changed | Summary of changes |
| V1 | DD/MMM/YYYY | NA | First version |
|  |  |  |  |

### List of abbreviations

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| --- | --- |
| MNH | Metro North Health |
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## Table of Contents

[Version history 1](#_Toc165986999)

[List of abbreviations 1](#_Toc165987000)

[Table of Contents 2](#_Toc165987001)

[1. Introduction and Background 3](#_Toc165987002)

[2. Aim(s) 3](#_Toc165987003)

[3. Methods 3](#_Toc165987004)

[4. Data analysis 3](#_Toc165987005)

[5. Data management 4](#_Toc165987006)

[6. Ethical considerations 4](#_Toc165987007)

[7. Conflicts of Interest 5](#_Toc165987008)

[8. Dissemination of research results 5](#_Toc165987009)

[9. Risk assessment 5](#_Toc165987010)

[9. Appendices 5](#_Toc165987011)

[10. References 5](#_Toc165987012)

### 1. Introduction and Background

The incidence of head and neck cancers is increasing. From 2009 to 2018, the number of cases diagnosed increased from 3896 to 5212.1 In the curative setting, radiotherapy is used either definitively or as an adjuvant treatment following surgery, with or without concurrent chemotherapy. A ‘typical’ fractionated course of radiotherapy consists of 35 fractions, over 7 weeks, for definitive treatment, and 30-33, over 6-6.5 weeks, for adjuvant setting. Not all patients are suitable for definitive treatment or surgical resection. Factors that need to be considered include tumour stage, patient preference, geography, fitness, and social support.

There is a wide range of palliative fractionations that require fewer treatments, at the expense of less tumour cell kill, local control, and a potential for increased late toxicity.2 The goal of such treatment is to induce significant and durable tumour regression, with consequent symptom control. An additional radiobiological advantage of shorter treatment is that the treatment will be largely completed before the onset of accelerated tumour repopulation.3 This is particularly significant for the management of advanced stage head and neck cancers in which a high growth rate is frequently observed.4

The optimal dose and fractionation have not been established. A systematic review highlighted a significant variation in practice, with a majority reporting high efficacy and low rate of significant side effects.1 A moderately hypofractionated dose fractionation of 50Gy in 20 fractions has been used in patients not suitable for definitive treatment with chemo-radiotherapy or surgery. This fractionation is frequently used in skin malignancies and seeks a balance between providing durable local control without the requirement for 7 weeks of daily radiotherapy. To our knowledge, the only available literature on the use of this dose fractionation is within a retrospective series by Stevens et al1 of various schedules in which 32 patients received this particular dose fractionation.

### 2. Aim(s)

To review the results of patients with a head and neck malignancy treated with a hypofractionated dose of 50Gy in 20 fractions across Metro North Health cancer care facilities.

### 3. Methods

This is a retrospective data analysis study, and no participants will be explicitly recruited or consented for this study. A waiver of consent to capture participant data is requested. Justification for the waiver is detailed in the ethical consideration section. Data will be collected from the cancer care units across MNH (Royal Brisbane and Women’s Hospital and The Prince Charles Hospital. The primary outcomes of this study are acute and late toxicity.

This study will review the results of all patients treated with 50 Gy in 20 fractions for head and neck cancer between 1st January 2024 to 1st January 2025 across MNH. We anticipate approximately 100 patients that will meet this criterion.

### 4. Data analysis

Depending on normality of the data, continuous variables will be assessed via the independent samples t-test or Mann-Whitney U test and categorical data will be compared using the chi-square test or Fisher’s exact test as appropriate. Kaplan Meier actuarial curves will be constructed for the endpoints of overall survival and disease specific survival. Log-rank test will be used to determine significance of the survival curves. Significance level will be defined as p ≤ 0.05 (2-sided).

### 5. Data management

The data items will be stored in a password protected excel spreadsheet which will be kept on a secure hospital network drive. Participants will only be identified for the purpose of data collection. All extracted data will be made non-identifiable prior to analysis. The collected data will be deleted five years following publication of the research, as per Queensland Health archiving guidelines.

Data obtained via the medical record will be collected by the Principal Investigator or an associate investigator (and designated person) at the site.

Appendix A includes the full data collection sheet. Data will be stored in a re-identifiable format to enable follow-up of cases and to do independent quality check of data entry. Two excel files will be used; one will include a study code/master key (e.g pt150gy with the UR number and date of birth); the data collection tool will include the study code and the medical record data (e.g pt150gy age, ethnicity, smoking hx, primary cancer site etc).

Only the Principal Investigator will have the Master Key spreadsheet, and the Master Key will be kept separate to the data collection sheet. Data will be stored on the Queensland Health network.

Data will be kept for 5 years from date of publication as per Queensland Health archiving guidelines.

### 6. Ethical considerations

This document is a protocol for a research project. This study will be conducted in compliance with all stipulations of this protocol, the conditions of the ethics committee approval, the NHMRC National Statement on Ethical Conduct in Human Research (2007) – Updated 2023, the NHMRC Australian Code for the Responsible Conduct of Research (2018) and Metro North Policy Framework.

##### Justification of Waiver of Consent

This study is seeking a waiver of consent from the Human Research Ethics Committee. The waiver is justified as below **[please provide relevant justification/details to each below]**:

1. **Involvement in the research carries no more than low risk** – the nature of the research means there is no risk to the participants and the potential results will bear no harm to the site or to participants whose data was used.
2. **The benefits from the research justify any risks of harm associated with not seeking consent** - The research has the potential to benefit a wide patient population by evaluating patient outcomes, thereby contributing to better patient outcomes in head and neck cancer. This outweighs the minimal risks associated with the non-invasive nature of the research. This broader benefit to society can justify the waiver of consent, provided all other ethical criteria are met.
3. **It is impracticable to obtain consent** - given the low-risk nature of the study and data required, it would be too costly and impractical to seek explicit consent for each participant. Also, there is no known or likely reason to believe that participants would object to the use of their de-identified data for the evaluation of their treatment.
4. **There is no known or likely reason for thinking that participants would not have consented if they had been asked.** As this is a low-risk study, there is no reason to assume that a participant would not consent to their data being used in this study, which will provide evidence of patient outcomes and explore mechanisms to improve patient outcomes.
5. **There is sufficient protection of their privacy** - The research protocol has provisions for protecting patient confidentiality and ensuring data security which includes the use of a master key and data being stored separately to the master key. Identifiable information will be kept strictly confidential within secured locked locations and only accessible to research investigators for the project. This satisfies the requirements for sufficient protection of participants' privacy and an adequate plan to protect the confidentiality of data.
6. **There is an adequate plan to protect the confidentiality of data** – As above the research protocol has provisions for protecting patient confidentiality and ensuring data security which includes the use of a master key and data being stored separately to the master key. Identifiable information will be strictly kept confidential within secured locked locations and only accessible to research investigators for the project. This satisfies the requirements for sufficient protection of participants' privacy and an adequate plan to protect the confidentiality of data.
7. **In case the results have significance for the participants’ welfare there is, where practicable, a plan for making information arising from the research available to them** - The waiver of consent will not adversely affect the rights and welfare of the participants. Since the research does not involve additional procedures or interventions, patients are not subjected to additional risks. Furthermore, measures are taken to protect patient confidentiality and ensure that data is used solely for the purpose of evaluating patient outcomes.
8. **The possibility of commercial exploitation of derivatives of the data or tissue will not deprive the participants of any financial benefits to which they would be entitled** - There is no commercial value in this study.
9. **The waiver is not prohibited by State, federal, or international law**. The data custodian has been consulted and evidence of data custodian approval will be provided to the research governance office with the site specific assessment application; this project meets *Section 150 of the Hospital and Health Services Board Act* for the purposes of health services monitoring and evaluation related to optimal dose. All persons involved are designated persons under the legislation and no data is to be provided to non-designated persons.

### 7. Conflicts of Interest

There are no declarations of interest. The PI is a MNH employee however this study will seek to monitor and improve patient outcomes across the department. Declaration of interests for researchers should be included in this section.

### 8. Dissemination of research results

The findings will be presented in the following forums:

* National and International scientific meetings/conferences
* Submit a manuscript to a peer reviewed journal
* Report findings at local academic meetings and grand rounds.

### 9. Risk assessment

This research uses medical records data for which justification around the waiver of consent has been presented. The study is low risk in nature; there is no potential harm or burden to participants; and this protocol details the management of the data to reduce any associated risks related to the data management. There are also no risks related to the outcomes of the study.

### 9. Appendices

Appendix A Data collection sheet

### 10. References

Include references to support your protocol.

***This template is made available with the assistance and support of Metro South Health Office of Research.***